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IS 13329 (1992): Pesticide - Triadimefon WP [FAD 1: Pesticides and Pesticides Residue Analysis]

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Indian Standard

PESTICIDE — TRIADIMEFON WP — SPECIFICATION

UDC 632·951 TRI

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

March 1992 Price Group 2

AMENDMENT NO. 1 JULY 1994
TO
IS 13329 : 1992 PESTICIDE — TRIADIMEFON WP — SPECIFICATION

(*Page* 2, *Table* 1):

a) *Sl No.* (ii), *col* 2 } — Delete the words 'after accelerated storage'.
b) *Sl No.* (iii), *col* 2 }

(FAD 1)

Reprography Unit, BIS, New Delhi, India

Pesticides Sectional Committee, FAD 1

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Pesticides Sectional Committee had been approved by the Food and Agriculture Division Council.

Triadimefon WP is largely used as fungicide in agriculture.

Triadimefon WP is generally manufactured to contain 25 percent (*m/m*) triadimefon.

In the preparation of this standard, due consideration has been given to the provisions of the *Insecticides Act*, 1968 and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under the Act and Rules, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

PESTICIDE — TRIADIMEFON WP — SPECIFICATION

1 SCOPE

This standard prescribes the requirements and the methods of sampling and test for triadimefon WP.

2 REFERENCES

The Indian Standards listed below are necessary adjuncts to this standard.

IS No.	*Title*
460 (Part 1) : 1985	Wire cloth test sieves (*third revision*)
1070 : 1977	Water for general laboratory use (*second revision*)
6940 : 1982	Methods of test for pesticides and their formulations (*first revision*)
8190 (Part 1) : 1988	Requirements for packing of pesticides: Part 1 Solid pesticides (*second revision*)
10627 : 1983	Methods for sampling of pesticidal formulations
13328 : 1992	Specification for triadimefon, technical

3 REQUIREMENTS

3.1 Constituents

3.1.1 The material shall consist of triadimefon, technical, together with suitable carrier(s), stabilizer(s) and other formulant(s).

3.1.2 Triadimefon, technical employed in the manufacture of the material, shall conform to IS 13328 : 1992.

3.2 Description

The material shall be a fine, free flowing, buff to off-white homogeneous powder. It shall be free from visible extraneous matter and hard aggregates. It shall wet readily on mixing with water, providing a suspension suitable for use as spray.

3.3 The material shall also comply with the requirements given in Table 1.

3.3.1 When determined by the method prescribed in **7.2** and Annex A of IS 13328 : 1992, the observed triadimefon content, percent (*m/m*) of any of the samples shall not differ from the declared nominal value by more than tolerance limits indicated below:

Nominal Value, percent	*Tolerance Limits, percent*	
Up to 9	+ 10 − 5	of the nominal value
Above 9 and below 50	± 5	
50 and above	+ 5 − 0	

4 PACKING

The material shall be packed in mild steel/tinplate/fibre board/composite/duplex board containers lined with LDPE liner of thickness not less than 0·062 mm. The containers shall also comply with the requirements specified in **2** of IS 8190 (Part 1) : 1988.

5 MARKING

The containers shall bear legibly and indelibly the following information in addition to the information as is necessary under the *Insecticides Act*, 1968 and Rules framed thereunder:

a) Name of the material
b) Indication of the source of manufacture;
c) Date of manufacture and date of expiry;
d) Batch number;
e) Net mass of contents;
f) Nominal triadimefon content, percent (*m/m*); and
g) The cautionary notice worded as in *Insecticides Act*, 1968 and Rules.

6 SAMPLING

6.1 When a bulk quantity of the material is offered for inspection, representative samples of the material shall be drawn as prescribed in IS 10627 : 1983 and tested within 90 days of its manufacturing. When material is offered for inspection after 90 days of its manufacturing,

Table 1 Requirements for Triadimefon WP

(*Clause* 3.3).

Sl No.	Characteristic	Requirement	Method of Test, Ref to	
			Annex of IS 13328 : 1992	Cl No. of IS 6940 : 1982
(1)	(2)	(3)	(4)	(5)
i)	Triadimefon content, percent by mass	Nominal value as declared on the container (*see* **3.3.1** and **7.2**)	A	—
ii)	Sieving, after accelerated storage (material passing through 75-micron IS Sieve), percent by mass, *Min* [*see* IS 460 (Part 1)] : 1985 (*see* Note)	98·0	—	11.1
iii)	Suspensibility, after accelerated storage, percent by mass, *Min* (*see* Note)	70·0	—	11.2
iv)	Wettability in seconds, *Max*	120	—	11.4
v)	Acidity (as H_2SO_4), percent by mass, *Max*	1·0	—	11.3
	or			
	Alkalinity (as NaOH), percent by mass, *Max*	0·5	—	11.3

NOTE — The material need not be subjected to accelerated storage treatment if it has crossed half of its shelf-life as ascertained from its dates of manufacture and expiry declared on the container.

sampling shall be done according to IS 10627 : 1983. However, the criteria for conformity of the material when tested, shall be limits of tolerances, as applicable over the declared nominal value and given under **3.3.1** of this standard.

7 TESTS

7.1 Tests shall be carried out by the methods referred to in col 4 and 5 of Table 1, **7.2** and **7.3**.

7.2 For determination of triadimefon content, weigh accurately a quantity of the sample so as to contain 0·2 g of triadimefon into a 100-ml beaker. Add 20 ml portions of acetone four times and stir to extract triadimefon. Filter under vacuum through a G 4 crucible containing a bed of hyflo supercel or equivalent. Collect the filtrate into a 100-ml volumetric flask. Proceed for determination of triadimefon content by the method described in Annex A of IS 13328 : 1992 after adding 10 ml internal standard solution, mixing well and making up the volume to the mark with acetone.

7.3 Suspensibility Test

7.3.1 For carrying out suspensibility test, start with 0·4 g of the sample, add 30 ml standard hard water and proceed as described in **11.2** of IS 6940 : 1982.

7.3.2 Transfer the bottom 25 ml of the suspension quantitatively to a 100-ml separating funnel using 25 ml solvent ether. Extract the triadimefon with 50 ml portions of ether two times and filter the extracts through a bed of anhydrous sodium sulphate. Evaporate the ether on a water bath and dissolve the residue in the flask in 5 ml acetone and add to it 5 ml internal standard solution (*see* **7.3.3**). Shake well to homogenise.

7.3.3 Take 8 ml of the internal standard solution IS 13328 : 1992 in a 50-ml volumetric flask and dilute up to the mark with acetone. Shake well.

7.3.4 Accurately weigh 0·1 g triadimefon reference standard into a 25-ml volumetric flask and dilute to the mark with acetone. Mix well. Take out 5 ml of the solution into a 10-ml volumetric flask and add 5 ml of the internal standard solution (*see* **7.3.3**). Mix well.

7.3.5 Determine the triadimefon content as described in IS 13328 : 1992.

7.3.6 Calculate the triadimefon content in the suspension including the sediment by the following formula:

$$\text{Triadimefon content, in g, in the suspension including sediment} = m = \frac{M_1 \times A_3 \times A_2}{A_4 \times A_1 \times D \times 100} \times P$$

where

M_1 = Mass, in g, of standard triadimefon in standard reference solution;

A_3 = Peak area of internal standard in the reference standard solution injected;

A_2 = Peak area of triadimefon in the sample solution injected;

P = Percent purity triadimefon reference standard;

A_4 = Peak area of internal standard in the sample solution injected;

A_1 = Peak area of triadimefon in the reference standard solution injected; and

D = Dilution factor = 5.

$$\text{Suspensibility, percent by mass} = \frac{1\,000\,(M-m)}{9\,M}$$

$$= \frac{(M-m)}{M} \times \frac{111 \cdot 11}{1}$$

where

M = Mass, in g, of triadimefon percent in the sample taken for suspensibility test;

m = Mass, in g, of triadimefon percent in the suspension including the sediment.

7.4 Quality of Reagents

Unless specified otherwise, pure chemicals and distilled water (*see* IS 1070 : 1977) shall be employed in tests.

NOTE – 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

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BUREAU OF INDIAN STANDARDS

Headquarters :

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones : 331 01 31, 331 13 75

Telegrams : Manaksanstha
(Common to all Offices)

Regional Offices :		Telephone
Central :	Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	311 01 31 331 13 75
Eastern :	1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola CALCUTTA 700054	37 86 62
Northern :	SCO 445-446, Sector 35-C, CHANDIGARH 160036	53 38 43
Southern :	C. I. T. Campus, IV Cross Road, MADRAS 600113	235 02 16
Western :	Manakalaya, E9 MIDC, Marol, Andheri (East) BOMBAY 400093	6 32 92 95

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